

Fig. 2 and Fig. 3 depict a film of the present invention where anti-reflection layer 3 is formed on one surface or each surface, respectively, of the transparent substrate 1.

Fig. 4 depicts a film of the present invention where adhesive layer 2 is formed on one surface of the transparent substrate 1 and a hard coating layer 4 and an anti-reflection layer 3 are consecutively formed on the other surface of the transparent substrate 1. --

IN THE CLAIMS:

Claim 1, rewrite as follows:

1. (Amended) An attachment film for an electronic display, which is for adjusting the quantity of transmitted light from a light source and adjusting color shades, which comprises an adhesive layer which contains carbon black dispersed therein and is formed on one surface of a transparent substrate.

REMARKS

Favorable reconsideration is respectfully requested.

Upon entry of the above amendment, the claims will be 1-11.

The above amendment is responsive to points set forth in the Official Action.

Claim 1 has been rejected as being anticipated by Okamoto et al. (US 5,889,569).

This rejection is respectfully traversed.

Okamoto et al. disclose a liquid crystal display comprising:

first and second glass substrates facing each other:

a plurality of spaced electrodes formed on said first glass substrate with openings between the electrodes, and

a sealing material adhesively connecting said first and second glass substrates at margins thereof to each other with first and second glass substrates spaced from each other, said sealing material containing light-impermeable pigment dispersed therein.

The present invention relates to an attachment film for electronic display device and Okamoto et al. relates to a liquid crystal display.

The adhesive layer of the present invention has the property of adjusting the quantity of transmitted light from a light source. Thus, the adhesive layer has a flat structure formed on one surface of a film, substantially formed on one whole surface of a film.

However, the sealing material such as the adhesive of Okamoto et al. has the property of light-impermeability by dispersing therein a light-impermeable pigment such as carbon black, and the sealing material is formed at margins of first and second glass substrate to connect adhesively each other with the first and second glass substrate spaced from each other.

According to the present invention, the transmissivity and the hue of light from a light source for color formation can be easily, simply and inexpensively adjusted by attaching a transparent substrate on which an adhesive layer containing carbon black and optionally an organic pigment is formed on the outer surface of a glass unit of an image display device.

The adhesive layer of Okamoto et al. cannot show properties of the adhesive layer of the present invention, since the adhesive layer of Okamoto et al. is formed at margins of a first and second glass substrate.

To conclude, the structure, function and effect of the adhesive layer of the present invention are completely different and unobvious from the sealing material of Okamoto et al.

Claim 2 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. in view of Lin (US 6,071,653).

This rejection is also respectfully traversed.

Lin has an effective date under 35 U.S.C. 102(a) of November 4, 1998 and is overcome by the enclosed verified English translation of Applicants' Japanese Priority Application 98405/98 with an effective date of March 26, 1998.

The Japanese priority application supports the claims in all essential respects.

Claims 3 and 4 have been rejected under 35 U.S.C. 103 as being unpatentable over Okamoto et al. in view of Drumm (US 6,025,097).

This rejection is respectfully traversed.

Okamoto et al. is discussed above.

Drumm discloses a method for curing a color filter on a field emission display screen, and a color pigment crystal is used in a color filter slurry layer.

The rejection states that Okamoto et al. disclose all claimed subject matter except the adhesive layer further contains a coloring pigment different from the carbon black and the coloring pigment is at least one pigment selected from the group consisting of a red pigment and a blue pigment.

However, as stated above, Okamoto et al. does not disclose all claimed subject matter. The attachment film of the present invention has a function of adjusting the quantity of transmittal light from a light source and adjusting color shades as now recited in claim 1. The sealing material of Okamoto et al. does not have the function of the present invention, so it contains a light-impermeable pigment to prevent light leak from the display.

One skilled in the art could not arrive at the present invention by the combination of Okamoto et al. and Drumm, since the structure of Okamoto et al. completely differs from that of the present invention and Drumm doesn't cure this deficiency.

Claims 5 and 6 have been rejected under 35 U.S.C. 103 as being unpatentable over Okamoto et al. in view of Kawazu et al. (US 5,876,854).

This rejection is also respectfully traversed.

Kawazu et al. discloses a UV absorbing, colored film which comprises, as main component, silicon oxide, titanium oxide, cerium oxide, coloring fine particles, and coloring metal oxide. The UV absorbing, colored film-covered glass articles can be controlled with respect to the color tone, the UV transmittance, and the visible light transmittance. Kawazu et al. discloses the color of the reflected light should be close to neutral gray and its value of a and b of the Lab color system should most preferably be 2.0 or below (col. 3, lines 29-34).

The UV absorbing, colored film containing the coloring fine particles of Kawazu et al. is obtained by coating, onto a substrate, a solution which comprises a compound capable of forming colored fine particles, and drying and calcining the coating (col. 7, lines 41-47).

In contrast to the invention of Kawazu et al., the adhesive layer of the present invention used in the attachment film for an electronic display is obtained by dispersing black carbon and other colorants into an adhesive.

Okamoto et al. and Kawazu et al. thus do not disclose or suggest the attachment film having the structure and the function of the present invention.

Claim 7 has been rejected under 35 U.S.C. 103 as being unpatentable over Matsubaguchi et al. (US 6,030,689) in view of Okamoto et al.

This rejection is also respectfully traversed.

Matsubaguchi et al. discloses a magnetic recording medium having a lower coating layer on the support and a magnetic layer formed on the lower coating layer. The lower coating layer comprises nonmagnetic particles or soft magnetic particles and a binder.

A carbon black may be incorporated into the lower layer, and it has a specific surface area of from 100 m²/g to 500 m²/g, and an average diameter of from 5 to 80 nm.

The incorporation of a carbon black is effective not only in lowering the surface electric resistance, but also in obtaining desired micro-Vickers hardness (col. 11, lines 36 to 39).

The object of incorporating of a carbon black into the lower coating layer is thus completely different from that of the present invention. Matsubaguchi et al. only discloses the specific surface area and the average diameter which are similar to those of the present invention.

Thus, the combined references fail to suggest the claimed invention.

Claim 8 has been rejected under 35 U.S.C. 103 as being unpatentable over Okamoto et al. in view of Ito (US 5,370,930), Conforti et al. (US 5,620,819) and Ueda et al. (US 5,968,244).

This rejection is respectfully traversed.

Ito discloses a coated polyester film usable as transfer printing foil, a transfer layer is provided on the surface of a coating layer. The transfer layer has an adhesive layer, and the adhesives usable for the adhesive layer are acrylic resins, etc. (col. Lines 37-40).

Conforti et al. relates to a protected image and uses a binder layer in the protected image. The first adhesive layer 18 comprises a polymer having acidic groups thereon, preferably carboxyl groups (col. 16, lines 53-55).

Ueda et al. discloses an ink for ink-jet recording containing carbon black particles. Ueda et al. also mentions "to produce dispersibility in water by increasing the surface area and having chemical properties akin to water-soluble dyes."

Ito et al., Conforti et al. and Ueda et al. partially set forth the components which are used in the present invention. However, these references are completely unsuggestive of the present invention. That is, the present invention discloses an attachment film for an electronic display. These references do not disclose or suggest the structure, the function and effect of the present invention nor is there any motivation to combine them so as to arrive at the present invention.

Claims 9 and 10 have been rejected under 35 U.S.C. 103 as being unpatentable over Okamoto et al. in view of Urano et al. (US 5,880,952).

This rejection is respectfully traversed.

Urano et al. discloses a photopolymerizable composition for a color filter, comprising a transparent substance having a color pattern formed thereon from a photopolymerizable composition which comprises (i) a photopolymerization system, (ii) a compound having at least one ethylenically unsaturated double bond, (iii) a colorant and (iv) at least one of a phosphoric (meth)acrylate compound and an organic carboxylic anhydride.

The photopolymerizable composition contains an organic binder polymer material as a binder to improve the compatibility, the coating film-forming property, the developability, the adhesive property, etc.

However, Urano et al. do not disclose or suggest the attachment film for an electric display of the present invention, that is, the attachment film does not have a color pattern. The photopolymerizable composition does not have the function of an adhesive layer, that is, having the property of being re-separable, leaving no component when peeled off, free of peeling and the occurrence of bubbles during an accelerated aging test under a high-temperature and high-humidity environment.

The properties and composition required by Urano et al. are thus completely different from and unsuggestive of those of the present invention and there is no motivation to combine the references to arrive at the present invention.

Claim 11 has been rejected under 35 U.S.C. 103 as being unpatentable over Miyashita et al. (US 5,783,299) in view of Okamoto et al. and Urano et al.

This rejection is respectfully traversed.

Okamoto et al. and Urano et al. are discussed above.

Miyashita et al. discloses a polarizer plate for use in a liquid crystal display. The required properties of the adhesive layer of Miyashita et al. are completely different from and unsuggestive of those of the present invention as stated above for Urano et al. nor is there motivation to combine references.

For the foregoing reasons, it is apparent that the rejections on prior art are untenable and should be withdrawn.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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